

## **REMARKS**

The present amendments and remarks are in response to the Office Action mailed July 30, 2004, where claims 1-7 were rejected, and claim 8 was objected to.

Reconsideration of the application is respectfully requested in view of the amendments and the following responsive remarks. For the Examiner's convenience and reference, the Applicants' remarks are presented in the order in which the corresponding issues were raised in the Office Action.

In the Office Action mailed July 30, 2004:

- 1) claims 9-15 were withdrawn from further consideration under 37 CFR 1.142(b);
- 2) claim 7 was objected to for antecedent basis reasons;
- 3) claims 1-4 were rejected under 35 U.S.C. 103(a) as being unpatentable over EP 960837 (hereinafter "Tognetti" and previously referred to as "Mauro") in view of U.S. Pat. No. 6,357,868 (hereinafter "Pfaff");
- 4) claims 5 and 6 were rejected under 35 U.S.C. 103(a) as being unpatentable over Tognetti in view of Pfaff, and further in view of U.S. Patent No. 5,891,232 (hereinafter "Moffatt"); and
- 5) claim 7 was rejected under 35 U.S.C. 103(a) as being unpatentable over Tognetti and Pfaff, and in view of Moffatt, and further in view of U.S. Patent No. 4,136,076 (hereinafter "Daniels").

Reconsideration of these rejections is respectfully requested.

### **General Comments Regarding All Rejections**

The present response is to put the claims in final condition for appeal, and to correct the Examiner's apparent misunderstanding of the Applicants' argument filed on May 18, 2004. In connection with this, the Applicants' urge the Examiner to review the last response more carefully, as it is apparent that a central point made by the Applicants was fundamentally misunderstood by the Examiner. Regarding this misunderstanding, the Examiner stated in section 5, Response to Arguments, the following:

"Applicant's argument that Tognett [sic] does not teach aqueous is not persuasive because refer to page 4, line 13-15, Tognetti teaches an aqueous chromophore."

The Applicant did not make this argument. The argument put forward by the Applicants was that Pfaff does not teach aqueous ink-jetting, and that Tognetti does not teach ink-jetting whatsoever. In fact, Pfaff teaches away from the ink-jetting of more traditional aqueous compositions (or suspensions), such as those taught by Tognetti. Specifically, Pfaff states the following:

“The use of inorganic pigments and especially inks having a high content of inorganic pigments leads to problems in the inkjet printer because the specifically heavy pigments.” See col. 1, ln.42-45.

“Attempts at printing ceramics [sic] colours by the inkjet process and hence making the inkjet process available also for decorating ceramic articles, such as glass, enamel and porcelain, have hitherto always failed owing to the pronounced tendency of the specifically heavy and coarse colour powder to form a sediment.” See col. 2, ln. 3-8.

The entire purpose of Pfaff is to print non-aqueous inks by melting pigments in a thermoplastic medium, and jetting the melted inks on to various types of surfaces. In other words, Pfaff deals exclusively with so-called “solid inks” for ink-jet printing. As is clear from the above-listed quotes from Pfaff, this reference goes to great lengths to state that more traditional ink-jet printing approaches, such as by printing suspensions, do not work.

The Examiner has also stated that Pfaff shows that direct printing and inkjet printing is “an equivalent structure known in the art.” However, this teaching is irrelevant, as Pfaff teaches away from aqueous inks for ink-jet printing on ceramics. Further, the mere fact that a specific composition can be printed by direct printing and inkjet printing for one type of composition, i.e. solid inks, does not mean that a completely different type of composition can be effectively printed by both methods. Pfaff itself teaches this very point by stating that printing of ceramic colors in suspensions “would rapidly lead to blocking of the print nozzles and of the entire inkjet printing apparatus.” See col. 2, ln. 3-19.

As further illustration of this point, there is no evidence in Tognetti that its compositions are ink-jettable, nor is there any suggestion that ink-jetting these compositions would be even desirable, particularly in light of all of the teachings in Tognetti that teach away from high resolution printing. Further, as no attempt has been made in Tognetti to formulate ink-jettable compositions, it would be unlikely that such compositions would even be ink-jettable at a practical level, e.g., these compositions would likely induce clogging, etc.

The ink-jetting of aqueous suspension, as taught by Pfaff, is not as simple as taking a known composition and putting it in an ink-jet printer. Clogging is of great concern in the ink-jet printing arts. This argument is more fully developed in many of the previously filed Office Action Responses, and should be carefully reconsidered by the Examiner before dismissing this argument once again.

In contrast to the teachings of Tognetti and Pfaff, the Applicants have discovered that ink-jet printing an aqueous chromophore-containing fluid onto a fluid glazing material which was previously applied to a ceramic article provides an effective method of digitally printing on ceramics. In other words, in one embodiment, by printing the chromophores onto a pre-glazed substrate, and not being required to print the glaze material, the solids can be more easily suspended in the ink-jet ink. This can result in an effective means of printing on ceramics using ink-jet technology that is quite different than the approach taught by Tognetti and Pfaff.

Thus, it is the Applicants' assertion that Pfaff does not teach or suggest aqueous ink-jet printing, and in fact, specifically teaches away from ink-jet printing of suspensions for ceramic applications. Tognetti does not teach of ink-jet printing at all, and in fact, it teaches away from ink-jet printing. Thus, these two references are not properly combinable, as they each teach away from one another and to combine these references amounts to hindsight analysis. Further, even if combined, neither reference teaches of an aqueous chromophore-containing composition that is ink-jetable. This fact cannot be ignored. Even adding a tertiary reference that may discuss ink-jetting similar types of chromophores, none of these types of references previously cited by the Examiner teaches that such inks can be fired as required by the independent claim.

As previously indicated, based on the already protracted prosecution history of this application, the Applicants are poised to appeal this case upon issuance of what the Applicants believe to be yet another repetitive and baseless Office Action. Final reconsideration, including re-reviewing and thorough consideration of the most recent previously filed Office Action Response, is respectfully requested. If such were to happen, the Applicants sincerely believe that all rejections would be withdrawn.

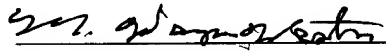
**CONCLUSION**

In view of the foregoing, Applicants submit that claims 1-8 present allowable subject matter and allowance is respectfully requested. If any impediment to the allowance of these claims remains after consideration of the above remarks, and such impediment could be removed during a telephone interview, the Examiner is invited to telephone Brad Haymond at (541) 715-0159 so that such issues may be resolved as expeditiously as possible.

Please charge any additional fees except for Issue Fee or credit any overpayment to Deposit Account No. 08-2025.

Dated this 29 day of Oct., 2004.

Respectfully submitted,



M. Wayne Western  
Attorney for Applicants  
Registration No. 22,788

Gary P. Oakeson  
Attorney for Applicants  
Registration No. 44,266

Of:

THORPE NORTH & WESTERN, LLP  
8180 South 700 East, Suite 200  
Sandy, Utah 84070  
(801) 566-6633

On Behalf Of:

HEWLETT-PACKARD COMPANY  
1000 NE Circle Blvd., m/s 422B  
Corvallis, OR 97330-4239  
(541) 715-0159

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